1. (Twice Amended) A stereoscopic image display method for permitting an observer to stereoscopically observe image information displayed on an image display element, comprising the steps of:

dividing each of parallax images, corresponding to a plurality of different view points, into predetermined stripe images;

synthesizing a synthetic parallax image from the stripe images;

guiding display light, from stripe images corresponding to one view point in the synthetic parallax image on the image display element displaying the synthetic parallax image, to a mask member having a mask pattern with predetermined openings and shields by a second optical system placed in front of the image display element; and

converging display light passing through the openings of the mask member to a position corresponding to the view point on an observation surface a predetermined distance apart, by a first optical system,

wherein the second optical system has predetermined periodic structure in each of horizontal and vertical directions in order from the light incident side, and an elementary optical element forming one period in the horizontal and vertical directions of the second optical system has optical action in the horizontal direction and optical action in the vertical direction different from each other.

2. (Unamended) The stereoscopic image display method according to Claim 1, wherein among image display light from pixels forming each stripe image, display light reaching a position of an observer's view point corresponding to the stripe

image is condensed to the mask member by the second optical system so as to pass through the openings of the mask member and the other light is intercepted by the shields.

3. (Not Presently Amended) The stereoscopic image display method according to Claim 1, wherein said second optical system forms images of pixels of said image display element on said mask member in the vertical direction and a position of a focal point of said second optical system is approximately coincident with a position of the mask member in the horizontal direction.

4. (Unamended) The stereoscopic image display method according to Claim 1, wherein N view points (N is an integer not less than 2) are arranged at equal intervals on the observation surface the predetermined distance apart.

5. (Not Presently Amended) The stereoscopic image display method according to Claim 4, wherein said first optical system and second optical system have predetermined periodic structure in the horizontal direction, and at least one of the second optical system and the image display element is placed on planes defined by intersections of straight lines connecting i) two adjacent view points out of the N view points arranged at the equal intervals in the horizontal direction and ii) a horizontal center of each elementary optical element forming the second optical system.

7. (Not Presently Amended) The stereoscopic image display method according to Claim 4, wherein intersecting points of straight lines connecting i) two

adjacent view points out of the N view points arranged at the equal intervals and ii) a horizontal center of each elementary optical element forming said second optical system are common to at least one of a) horizontal centers of the respective elementary optical elements forming the second optical system and (agree with) b) horizontal centers of pixels forming the image display element.

8. (Not Presently Amended) The stereoscopic image display method according to Claim 1, wherein the following relations are met:

$$Nd*HL1/E = Lhd/(Lhd + Lh0) \quad (h1)$$

$$Hd/HL1 = (Lh0 + Lhd)/Lh0 \quad (h2)$$

$$NL2*HL1/E = LhL2/(LhL2 + Lh0) \quad (h3)$$

$$HL2/HL1 = (Lh0 + LhL2)/Lh0 \quad (h4)$$

$$Hl/E = Lh1/(Lh1 + Lh0) \quad (h5)$$

$$Hl/HL1 = (Lh0 + Lh1)/Lh0 \quad (h6)$$

$$H1*Lh1a/Lh1 = HL1*Lh1b/Lh1 \quad (h7)$$

$$Lh1a + Lh1b = Lh1 \quad (h8)$$

$$Hm/H1 = Lh1a/Lh1 \quad (h9)$$

where N view points (N is an integer not less than 2) are arranged at equal intervals E on the observation surface the predetermined distance apart, HL1 is a horizontal period of elementary optical elements forming said first optical system, Hm a horizontal width of the openings of said mask member, HL2 a horizontal period of elementary optical elements forming said second optical system, Hd a horizontal pixel pitch of the image display element, LhL2 and Lhd an optical reduced distance between the first optical system

and the second optical system and an optical reduced distance between the first optical system and the image display element, respectively, Lh0 an optical reduced distance from the observation surface to the first optical system, Lh1 an optical reduced distance from the first intersecting plane, when measured from the first optical system toward the image display element, out of the intersecting planes of line groups connecting two adjacent view points out of the N view points and each pixel of the image display element, to the first optical system, Lh1a and Lh1b an optical reduced distance from the first optical system to the mask member and an optical reduced distance from the mask member to the first intersecting plane from the first optical system out of the intersecting planes, and Nd and NL2 integers not less than 2 (Nd > NL2).

9. (Unamended) The stereoscopic image display method according to Claim 1, wherein relations of Eq. (V1N) to Eq. (V3N) or relations of Eq. (V1N) to Eq. (V4N) below are met:

$$Vd:Vm = LV1:LV2 \qquad (V1N)$$

$$2 \cdot N \cdot Vd:VL = LV1+LV2 : LV2 \qquad (V2N)$$

$$1/LV1 + 1/LV2 = 1/fV \qquad (V3N)$$

$$N \cdot Vd:VL = LV0+LV1+LV2 : LV0+LV2 \qquad (V4N)$$

where Vd is a vertical pixel pitch of said image display element, Vm a vertical width of the openings or the shields of the mask pattern of said mask member, LV1 an optical reduced distance from the image display element to a surface of the second optical system having optical action in the vertical direction, LV2 an optical reduced distance from the surface of the second optical system having the optical action in the

vertical direction to the mask pattern, fV a vertical focal length of individual elementary optical elements forming the second optical system, LV0 an optical reduced distance between the mask pattern and the observation surface, and N the number of view points (N is an integer not less than 3).

10. (Unamended) The stereoscopic image display method according to Claim 1, wherein relations of Eq. (V1) to Eq. (V3) or relations of Eq. (V1) to Eq. (V4) below are met:

$$Vd:Vm = LV1:LV2 \qquad (V1)$$

$$2 \cdot Vd:VL = LV1+LV2 : LV2 \qquad (V2)$$

$$1/LV1 + 1/LV2 = 1/fV \qquad (V3)$$

$$Vd:VL = LV0+LV1+LV2 : LV0+LV2 \qquad (V4)$$

where said number of viewpoints is 2, Vd is a vertical pixel pitch of said image display element, Vm a vertical width of the openings or the shields of the mask pattern of said mask member, LV1 an optical reduced distance from said image display element to a surface of said second optical system having optical action in the vertical direction, LV2 an optical reduced distance from the surface of the second optical system having the optical action in the vertical direction to the mask pattern, fV a vertical focal length of individual elementary optical elements forming the second optical system, and LV0 an optical reduced distance between the mask pattern and the observation surface.

11. (Unamended) The stereoscopic image display method according to Claim 1, wherein said first and second optical systems comprise microlens arrays.

12. (Unamended) The stereoscopic image display method according to Claim 1, wherein said first and second optical systems comprise lenticular lenses.

13. (Not Presently Amended) The stereoscopic image display method according to Claim 1, wherein said second optical system is comprised of a lenticular lens in which cylindrical lenses being elongated in the vertical direction and having an optical power only in the horizontal direction are arranged at predetermined intervals in the horizontal direction and a lenticular lens in which cylindrical lenses being elongated in the horizontal direction and having an optical power only in the vertical direction are arranged at predetermined intervals in the vertical direction.

14. (Unamended) The stereoscopic image display method according to Claim 1, wherein said second optical system is a microlens array in which toroidal lenses having a focal length in the vertical direction and a focal length in the horizontal direction different from each other are arranged in a predetermined period in the horizontal direction and in a predetermined period in the vertical direction.

15. (Not Presently Amended) A stereoscopic image display method using an image display element and a mask member having a mask pattern with predetermined openings and shields, said method comprising the steps of:

directing image display light from the image display element; and

effecting the directing of the image display light with a first optical system and a second optical system placed before and after the mask pattern, wherein the second

optical system has predetermined periodic structure in each of horizontal and vertical directions in order from the light incident side, and an elementary optical element forming one period in the horizontal and vertical directions has optical action in the horizontal direction and optical action in the vertical direction different from each other.

16. (Not Presently Amended) A stereoscopic image apparatus using the stereoscopic image display method as set forth in any one of Claims 1 to 5 and 7 to 15.

Please add new Claims 17 through 22 as follows:

--17. (New) A new stereoscopic image display apparatus for providing parallax images corresponding to a plurality of different view points on an observation surface to permit an observer to stereoscopically observe image information displayed on an image display element, comprising:

a display device for displaying a synthetic parallax image obtained by synthesizing the parallax images corresponding to a plurality of different view points;

a mask member having predetermined openings and shields placed in front of the display device;

a first optical member, placed in front of the mask member, for providing the parallax images corresponding to a plurality of different view points on the observation surface displaced with a predetermined distance; and

a second optical member, placed in between the display device and the

mask member, for guiding a light from the display device at a predetermined position of the mask member,

wherein the display device generates a divergent light to display an image,

wherein an optical power of the second optical member in a horizontal plane is equivalent to a vertical lenticular lens having a periodic structure in a horizontal direction, the vertical lenticular lens and the mask member being arranged to be spaced with substantially the same distance as a focal distance of an elementary optical element constituting a cycle of the vertical lenticular lens,

wherein the mask member includes an opening positioned at a focal point of each of the elementary optical elements constituting a cycle of the vertical lenticular lens,

and wherein the first optical member is a lenticular lens having a periodic structure in a horizontal plane and is arranged to be spaced from the mask member by substantially the same distance as a focal distance of an elementary optical element constituting a cycle of the first optical member.

18. (New) A stereoscopic image display apparatus according to Claim 17, wherein the optical power of the second optical member in a vertical plane is equivalent ~~to~~ a horizontal direction and the synthetic parallax image is guided at a position corresponding to the mask member.

19. (New) A stereoscopic image display apparatus according to Claim 18,

wherein the horizontal lenticular lens used to generate an optical power in a vertical plane of the second optical member images the image displayed on the display device onto the mask member in a vertical direction.

20. (New) A stereoscopic image display apparatus according to one of Claims 17 to 19, wherein the synthetic parallax image is formed by dividing each of parallax images corresponding to a plurality of different view points into predetermined stripe images and synthesizing the stripe images.

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21. (New) A stereoscopic image display apparatus according to one of Claims 17 to 19, wherein the focal distance of the elementary optical element constituting a cycle of vertical lenticular lens having an optical power equivalent to an optical power in a horizontal plane of the second optical member is different from the distance between the vertical lenticular lens and the display device.

22. (New) A stereoscopic image display apparatus according to one of Claims 17 to 19, wherein the second optical member comprises individual vertical and horizontal lenticular lenses.--

REMARKS

Claims 1-5 and 7-22 are pending in the application, with Claims 1, 15, and 17 being independent. Claim 1 has been amended and is believed to remain allowable. New Claims 17-22 have been added. Applicants submit that support for the amendments